

## A New *Chetia* (Pisces, Cichlidae) from the Incomati River System, Eastern Transvaal, South Africa

by

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For many years the Transvaal 'canary kurper' of the Limpopo River was confused with *Serranochromis thumbergi* (Castelnau). In a paper read at the 2nd Symposium on African Hydrobiology and Inland Fisheries, Brazzaville, 1956, S. S. du Plessis drew attention to the doubtful status of *S. thumbergi*, a species of the Upper Zambezi River system, in Transvaal waters. Material was supplied to Dr. Trewavas of the British Museum (Natural History) who found that the specimens represented a new genus and species, *Chetia flaviventris* Trewavas, 1961. Recent surveys of the Komati and Lomati Rivers large tributaries of the Incomati River system, carried out by personnel of the Lydenburg Provincial Fisheries Institute, resulted in the collection of some Cichlids which, superficially, resembled either young *C. flaviventris* or *Haplochromis darlingi* (Boulenger). Additional material was obtained together with detailed field observations. On examination the specimens proved to represent a new species of *Chetia* which is described below.

### *Chetia brevis* sp. nov.

*Holotype*: Male 128 + 27 mm. from the Lomati River, Barberton District, a tributary of the Incomati River which enters the sea near Lourenco Marques, Mocambique. Specimen P.F. 951, Albany Museum, Grahamstown, collected by Mr. I. G. Gaigher, September, 1967, together with ten paratypes, P.F. 952. Provincial Fisheries Institute registration No. M 67/186. One paratype has been deposited in the British Museum (Natural History), London.

The specific name refers to its smaller maximum size, shorter snout, shorter lower jaw and shorter premaxillary pedicels when compared with *C. flaviventris* the type-species.

*Description*: In percentage of Standard Length; Depth of body: 29 (88 mm. S.L.)—37 (135 mm. S.L.). Type 33.5 Length of head: 33 (88 mm. S.L.)—37 (135 mm. S.L.). Type 34.5 Length of pectoral fin: 18 (88 mm. S.L.)—26 (93 mm. S.L.) Type 23.0 Length of caudal peduncle: 20 (91 mm. S.L.)—16 (135 mm. S.L.) Type 20.0.

In percentage of length of head: Length of lower jaw 39 (88 mm. S.L.)—44 (135 mm. S.L.). Type 40.5. Length of snout 27 (88 mm. S.L.)—36 (135 mm. S.L.). Type 35.5.

Length of premaxillary pedicels: 21 (128 mm. S.L.)—26 (92.5 mm. S.L.). Type 21.0. Diameter of eye 20 (128 mm. S.L.)—26 (86 mm. S.L.). Type 20.0. Interorbital width 23 (92.5 S.L.)—26 (735 mm. S.L.). Type 24.6.

Mouth oblique, cleft 20°–30° with horizontal. Premaxillary pedicels reaching to between nostril and border of eye. Maxillary reaching posterior to nostril but not below border of eye. Teeth (Fig. 2) in upper jaw in two series with a few scattered teeth forming a third series anteriorly; teeth small, unicuspid, 40–50 in outer series. Gill rakers (Fig. 3) 9–10 on lower portion of anterior arch, the upper 4–5 short and stiff with extremities pointed.

Dorsal fin with 24–26 rays, comprising XIV–XV spines and 10–12 branched rays, type XIV 12. Anal fin with 10–12 rays, comprising III spines and 7–9 branched rays. Caudal truncate with rounded corners. Scales ctenoid, lateral line scale count 32–34, type 33.

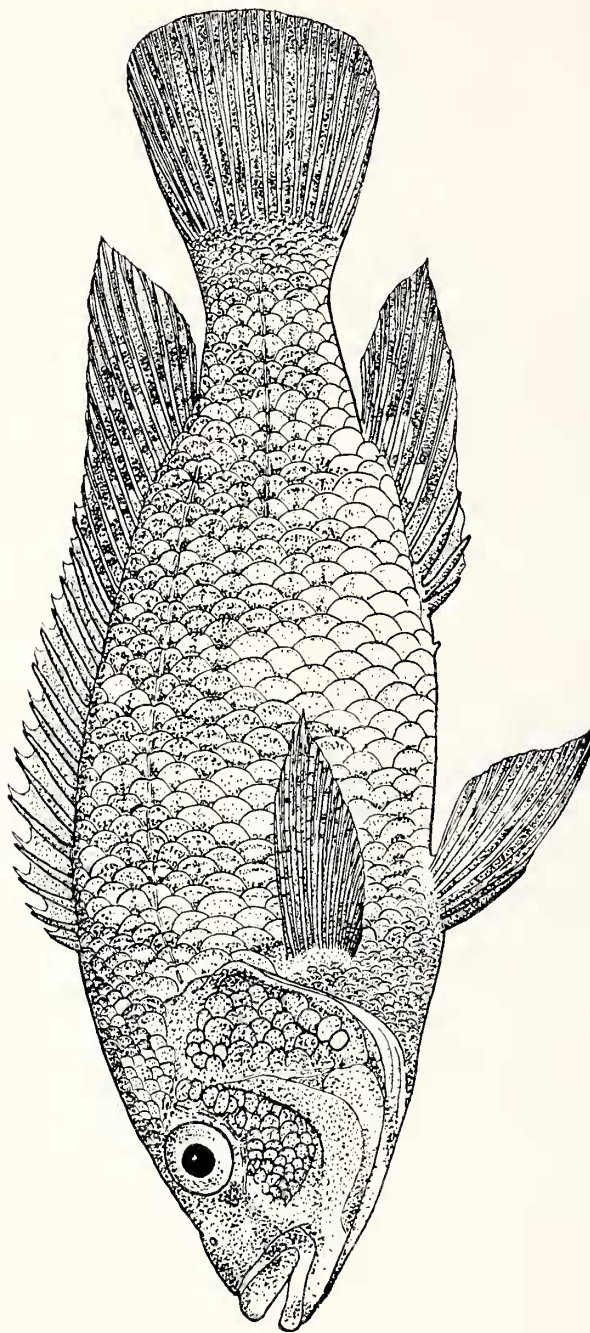


Figure 1. Type specimen of *Chetia brevis* sp. nov. Standard length 128 mm.

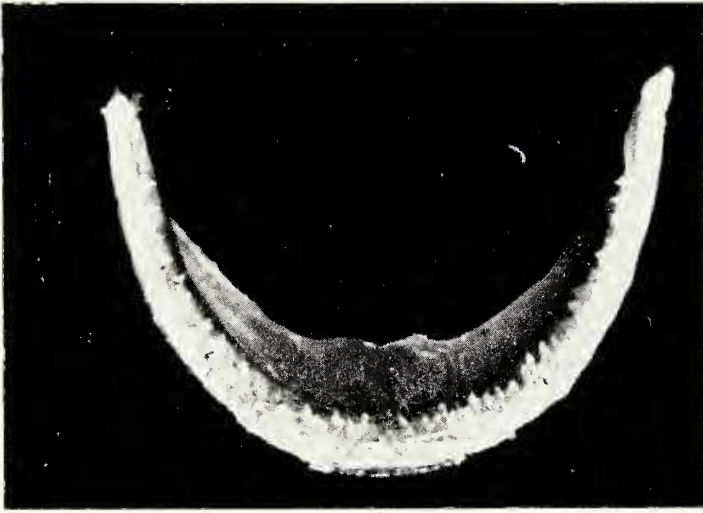


Figure 2. Upper jaw of a specimen of *C. brevis*. Standard length 95 mm.

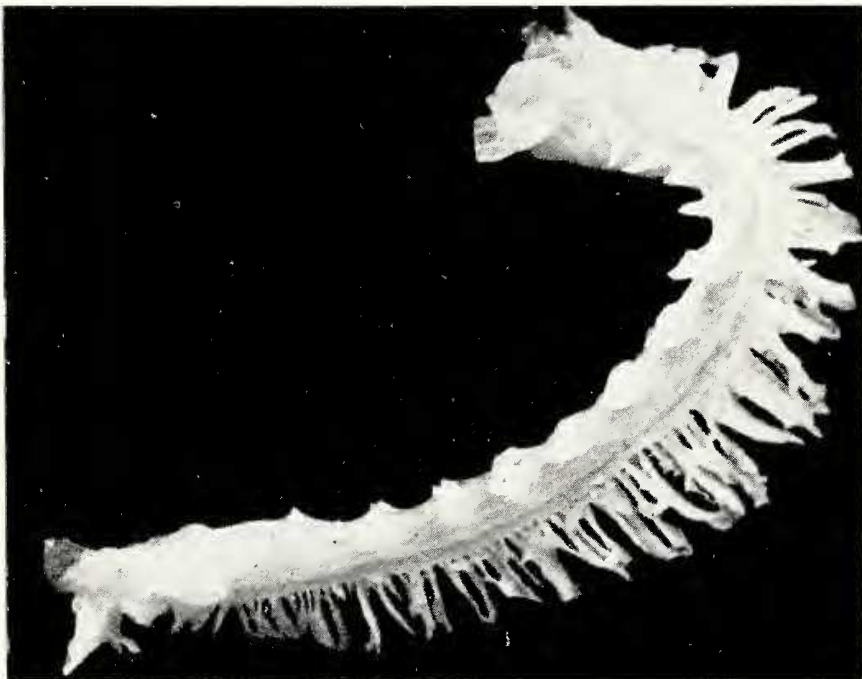


Figure 3. Anterior gill raker of a specimen of *C. brevis*. Standard length 95 mm

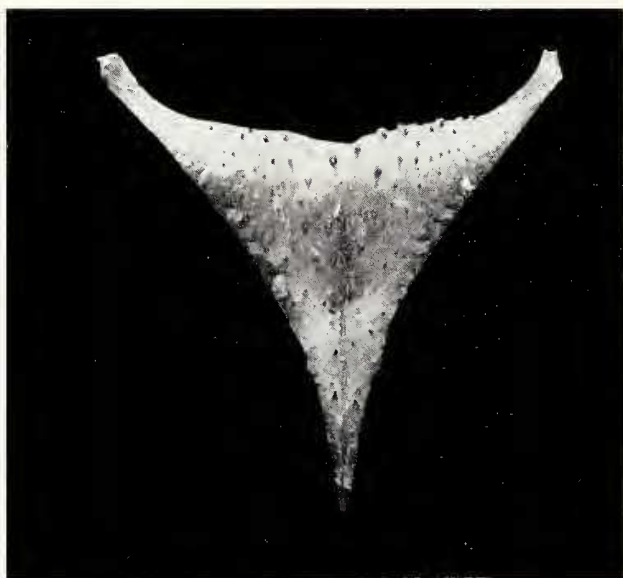


Figure 4A. Lower pharyngeal teeth of *C. brevis*. Standard length 95 mm.

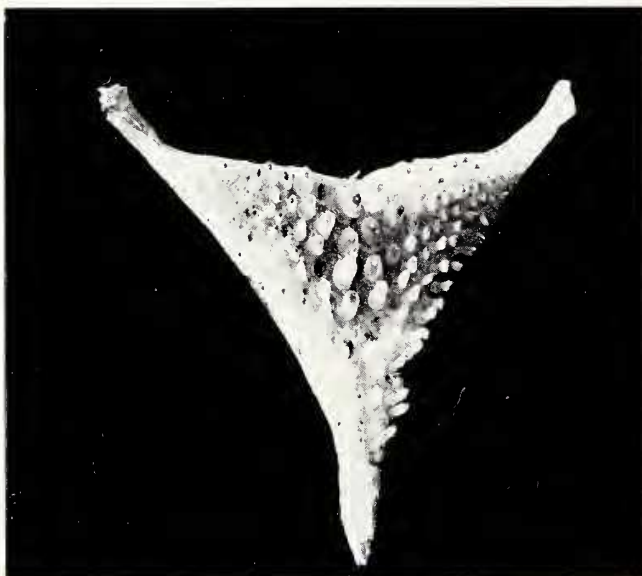


Figure 4B. Lower pharyngeal teeth of *C. brevis*. Slightly oblique view to show shape of teeth.

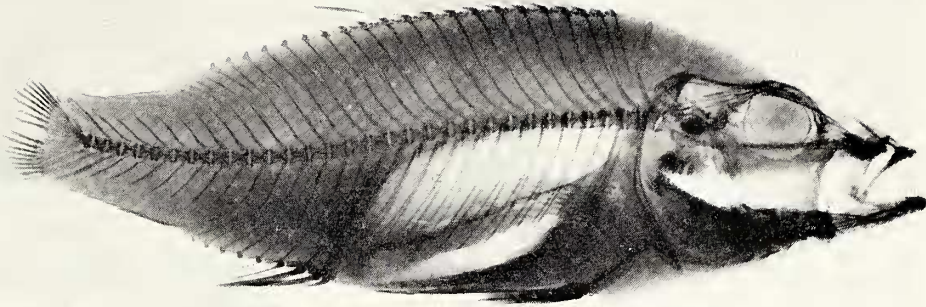


Figure 5A. X-ray photograph of type specimen of *C. brevis*. Standard length 128 mm.



Figure 5B. X-ray photograph of a specimen of *C. flaviventris* taken from Hartbeespoort Dam, Crocodile River, Limpopo River.

The lower pharyngeal bone is triangular, its dentigerous surface as broad as it is long (Fig. 4 A and B). The majority of the pharyngeal teeth are slender, pointed, with extremities hooked, but those teeth in the centre have stout bases.

Vertebral count for five specimens 30–31, the type (Fig. 5A) having 31. A double-keeled ventral vertebral apophysis is present on the third vertebra. Figure 5B is of a specimen of *C. flaviventris* from the Hartbeespoort Dam, Crocodile River, Limpopo River system.

*Colour pattern:* Specimens preserved in formalin have a shadowy mark between the eye and maxillary, a dark opercular spot, and a series of faint vertical bars which tend to link in some specimens forming an irregular lateral stripe. These body markings are more accentuated in the case of female or young specimens than in the case of an adult male. The membrane between the branched rays of the dorsal and caudal fins has numerous dark spots. The rayed portion of the anal fin of a male has one to four large ocellate spots. Living mature males are olive-brown on the dorsal surface, blending to pale silvery olive on the belly, the vertical bars and body markings being dark green-brown. The top of the dorsal fin is fringed with pale orange, the spots on the soft portion of the dorsal fin being the same colour. The large ocellate

spots on the anal fin are a bright orange. The female tends to be more silvery in colour and lacks the orange fringe to the dorsal fin, and the bright orange ocellate spots on the anal fin.

*Ecology:* As recorded by Gaigher (*in litt.*) the distribution of *C. brevis* in the Incomati River system is confined to the Lomati and Komati rivers below 1,500 feet above sea-level. This species has not been found, in the Incomati River, in association with *Serranochromis meridianus* Jubb, 1967, described from the Sabie River, an adjacent tributary of the same system. Material from Moçambique contains representatives of both species taken from Lake Chieunga, a freshwater lake situated near the coast between the mouth of the Limpopo River and that of the Incomati. This lake appears to drain into the estuarine portion of the Limpopo River. There are numerous freshwater lakes in this region and a taxonomic study of their fish faunas is being carried out in collaboration with Dr. Mário da Costa of Lourenço Marques. Until this has been completed it will not be possible to give a complete picture of the distribution of *C. brevis* and *S. meridianus* along the inland waters of the east coast.

Like *C. flaviventris*, *C. brevis* feeds chiefly on small fish and aquatic insects. It is a mouth-brooder, the female carrying the eggs.

*Affinities:* *C. brevis* differs from *C. flaviventris* chiefly in the colour pattern of mature males. Males of the latter species tend to be a bright yellow (hence the local name canary kurper) with numerous bright red dots on the anal fin. Mature males of *C. brevis* have one to four large bright orange ocellate spots on the anal fin. *C. brevis* has a greater interorbital width, a shorter lower jaw, and shorter premaxillary pedicels than *C. flaviventris*.

Superficially *C. brevis* could be confused with *Haplochromis darlingi* (Boulenger) and *H. callipterus* (Günther) (synonym *H. swynnertoni* (Boulenger)) but these two species have three distinct series of teeth in the upper jaw, and stout rounded teeth in the centre of the lower pharyngeal bone.

*Note:* Greenwood (1967) has drawn attention to the record of six specimens of *Haplochromis spekii* (Boulenger), a Lake Victoria Cichlid, from the Magalies River (Limpopo system) by Gilchrist and Thompson (1917). This has been investigated by le Roux who has informed me (*in litt.*) that these particular specimens cannot be found in the Transvaal Museum, but that there are two others, also identified as *Haplochromis spekii*, from the Hartbeespoort Dam, Crocodile River. These specimens should be identified as *Chetia flaviventris*.

#### Acknowledgements

The taxonomy of the freshwater fishes of southern Africa is part of a research programme carried out at the Albany Museum, and which is sponsored by the Council for Scientific and Industrial Research, Pretoria. I am indebted to the Senior Fisheries Officer, Mr. P. le Roux, and Mr. I. G. Gaigher, both of the Provincial Fisheries Institute, Lydenburg, for material and data relating to this new species. I am also indebted to Dr. Mário da Costa for supplying material from Portuguese East Africa. Mr. F. L. Farquharson of the Albany Museum kindly prepared the X-ray photographs and Mrs. H. M. Jubb the drawing of the type specimen.

This paper is published by courtesy of the Director of the Albany Museum, Mr. C. F. Jacot Guillarmod.

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